and manganese need to be provided when alimentation exceeds 30 days.

Modifications of this basic regime will undoubtedly lead to more effective maintenance of patients in hepatic failure, renal failure and other frustrating metabolic challenges.

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Intestinal Atresia as a Complication of Intrauterine Disease Processes

Congenital jejunoileal atresia has been observed with increasing frequency in association with meconium ileus (mucoviscidosis), gastroschisis, ruptured omphalocele, aganglionosis (Hirschsprung's disease) and meconium peritonitis of unknown cause.

All known human forms of jejunoileal atresia and stenosis—that is, (a) "diaphragms," (b) "cord-like tubes" and (c) complete separations (with mesenteric defects)—have been produced in experimental animals (dog, sheep and rabbit) by intrauterine vascular occlusion. Variation in the timing and site of the vascular interruption produces the different types of atresia noted above.

It appears probable that all forms of atresia below the duodenum are the result of vascular "accidents" occurring in the latter stages of pregnancy. When atresia is regarded as a "secondary" phenomenon or "complication," there is increased interest in searching for the basic disease process involved. In addition to the diagnoses listed above, which may produce 25 percent of all jejunoileal atresias in humans, there has been increased recognition of the presence of scars and granulomas of the mesentery (40 percent), and vascular impairment proximal and distal to the site of atresia.

One practical result of the acceptance of this etiologic concept has been recognition of the importance of wide resection in atresia. Whether one believes that this is necessary because of diminished blood supply to the intestine proximal and distal to the area, associated with the original infarction, or is because dilatation of the proximal segment has reduced its motility, it is now apparent that a wide resection of the jejunum greatly improves the results of operation. This should be extended proximal to a point of non-dilated intestine.

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Subphrenic Abscess

Purulent collections above and below the liver, in the lesser sac and beneath the left diaphragm, occur simultaneously in more than one location in 12 to 45 percent of patients. The incidence of missed abscesses varies from 22 to 29 percent and the death rate of patients with multiple, bilateral or missed abscesses is remarkably high, with inadequate drainage responsible for about half the deaths. Traditionally, subphrenic abscesses have been approached by a variety of operations designed to avoid serous cavities in the apparently mistaken belief that the resulting morbidity and mortality rates would be lower. Evidence is accumulating that these "selective" drainage approaches are inadequate, often miss important purulent collections and simply do not work. Formal exploratory laparotomy with drainage that is truly dependent offers substantially improved morbidity and mortality rates, significantly lower incidence of missed or inadequately drained abscesses and appear to be a definite advance in surgical treatment.

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